Long-term water treatment

PolyMet mining systems are designed to protect water during operations and after closure. Treatment technologies already exist and have been proven in real-world applications. The company is committed to water monitoring and treatment for as long as it takes. What's more, the company is required by law to support a monitoring and treatment program after closure and to provide bankruptcy-proof financial resources to fund it.

For how long will the company need to monitor and treat water?

- The SDEIS plans call for two treatment plants to be built – one to treat water at the mine site and the other to treat water at the tailings basin at the plant site. Water treatment plants are generally categorized as active water treatment technologies. The plans also call for financial assurance funding to be in place sufficient to cover the costs of active water treatment.
- PolyMet believes that within 30 years after closure, all water will be treated by passive treatment technologies.
- Passive water treatment technologies, such as constructed wetlands, are proven methods of water treatment that mimic Mother Nature's own method of filtration and purification. Passive systems, however, need to be designed for site-specific conditions. Once installed, the ongoing costs of passive water treatment are anticipated to be minimal. PolyMet has already begun testing passive systems on site and will continue to test in real-world conditions during the 20-year permitted mine life until a treatment performance that is acceptable to regulators is achieved. Until that time, the company will actively treat the water using tried and proven membrane filtration technology.

Long-term treatment required even if PolyMet doesn't mine

- An important aspect of the project often overlooked in the debate over long-term treatment is that our plant site, which is the site of the former LTV Steel plant that began operations in the 1950s, has legacy water issues that will require long-term treatment whether we mine or not. These legacy issues, namely hardness, conductivity, suspended solid and sulfate, occurred before the advent of modern environmental controls and technologies, which now keep these issues from occurring in the first place.
- It is beneficial to the environment and the state for PolyMet to obtain permits to mine because the legacy water issues can be addressed sooner rather than later and with the benefit of a more comprehensive treatment plan.
- Long-term water treatment is not new or uncommon for many types of mining in Minnesota and elsewhere. Long-term monitoring and treatment often is one of the trade-offs for mining in a responsible way the minerals that are necessary to our modern lives.

Why do some news reports say that water treatment will be required for 200 to 500 years?

- Information about water models developed for the environmental review is being used incorrectly. The timeframes used in the water models have nothing to do with water treatment and everything to do with ensuring that downstream water resources are protected in the event untreated water leaks offsite. *The models were not designed to determine the duration of water treatment.*

- More specifically, the models were designed to determine impacts to water quality at key reference points in the watersheds downstream of the tailings basin (Embarrass River watershed) and downstream of the mine site (Partridge River watershed). Scientists determined the amount of potential leakage to be relatively small (about the flow of a 5/8-

inch garden hose) and the rate of travel to be slow (about 3 inches per day) to these respective points, so the extended timeframes (200 years in one case and 500 years in the other) were needed in the models to represent the maximum potential impacts at the reference points. The modeling was performed to ensure that all state and federal water quality standards will be met at these reference points into the future.

- The modeling years have no correlation to the years that will be required for actual treatment.

How is long-term water treatment paid for if PolyMet isn't around?

- Before PolyMet can obtain a Permit to Mine from the state, it must have in place a Contingency Reclamation Plan that provides details on how the project will be closed and reclaimed, detailed estimates for the associated costs of the work, and bankruptcy-proof financial resources in place to cover those costs.
- The state will determine the most appropriate type of funding during the permitting process. It could select from any number of possibilities including trust funds or escrow accounts, surety bonds, letters of credit, certificates of deposit or insurance policies. Whatever instrument, or combination of instruments, it selects, it has to be bankruptcy proof, continuously in place and readily available to regulators.
- PolyMet will fully comply with Minnesota law and meet its reclamation and financial assurance obligations.

For more information about financial assurance, see the Financial Assurance Fact Sheet.